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<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>		ATTORNEY'S DOCKET NUMBER <b>M02B162</b>
INTERNATIONAL APPLICATION NO. <b>PCT/GB03/05370</b>		U.S. APPLICATION NO. (If known, see 37 CFR 1.5) <b>10/536,781</b>
INTERNATIONAL FILING DATE <b>December 19, 2003</b>		PRIORITY DATE CLAIMED <b>December 17, 2002</b>
TITLE OF INVENTION <b>Vacuum Pumping Arrangement</b>		
APPLICANT(S) FOR DO/EO/US <b>Nigel Paul SCHOFIELD</b>		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
<ol style="list-style-type: none"> <li>1. <input type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li>2. <input checked="" type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</li> <li>4. <input type="checkbox"/> The US has been elected (Article 31).</li> <li>5. <input type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))               <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).               <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))               <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</li> <li>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol> <p><b>Items 11 to 20 below concern document(s) or information included:</b></p> <ol style="list-style-type: none"> <li>11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li>13. <input type="checkbox"/> A preliminary amendment.</li> <li>14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</li> <li>15. <input type="checkbox"/> A substitute specification.</li> <li>16. <input checked="" type="checkbox"/> A power of attorney and/or change of address letter.</li> <li>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.</li> <li>18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</li> <li>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</li> </ol>		

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U.S. APPLICATION NO. (if known, see 37 CFR 1.5) <b>10/536,781</b>		INTERNATIONAL APPLICATION NO. <b>PCT/GB03/05370</b>		ATTORNEY'S DOCKET NUMBER <b>M02B162</b>	
20. Other items or information: Certificate of Mailing, Response to Notification of Missing Requirements, Copy of Notification of Missing Requirements, and Return Receipt Postcard					
The following fees have been submitted				<b>CALCULATIONS</b>	<b>PTO USE ONLY</b>
21. <input type="checkbox"/> Basic national fee (37 CFR 1.492(a))..... <b>\$300</b>				\$	
22. <input type="checkbox"/> Examination fee (37 CFR 1.492(c))				\$	
If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)..... <b>\$0</b>				\$	
All other situations..... <b>\$200</b>				\$	
23. <input type="checkbox"/> Search fee (37 CFR 1.492(b))				\$	
If the written opinion of the ISA/US or the International preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)..... <b>\$0</b>				\$	
Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority..... <b>\$100</b>				\$	
International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB..... <b>\$400</b>				\$	
All other situations..... <b>\$500</b>				\$	
<b>TOTAL OF 21, 22 and 23 =</b>				\$	
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing in an electronic medium) (37 CFR 1.492(j)). The fee is <b>\$250</b> for each additional 50 sheets of paper or fraction thereof.				\$	
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE	\$	
- 100 =	/50 =		x \$250	\$	
Surcharge of <b>\$130.00</b> for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 CFR 1.492(h)).				\$ 130.00	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$	
Total claims	- 20 =		x \$ 50	\$	
Independent claims	- 3 =		x \$200	\$	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$360	\$	
<b>TOTAL OF ABOVE CALCULATIONS =</b>				\$ 130.00	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.				\$	
<b>SUBTOTAL =</b>				\$ 130.00	
Processing fee of <b>\$130.00</b> for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).				\$	
<b>TOTAL NATIONAL FEE =</b>				\$ 130.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). <b>\$40.00</b> per property				\$	
<b>TOTAL FEES ENCLOSED =</b>				\$ 130.00	
				Amount to be refunded:	\$
				Amount to be charged	\$

10/17/2005 ATRAN1 00000165 022865 10536781  
01 FC:1617 130.00 DA


Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

- a. ☐ A check in the amount of \$ \_\_\_\_\_ to cover the above fees is enclosed.
- b. ☒ Please charge my Deposit Account No. 02-2865 in the amount of \$ 130.00 to cover the above fees.  
A duplicate copy of this sheet is enclosed.
- c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 02-2865. A duplicate copy of this sheet is enclosed.
- d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

**NOTE:** Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.

SEND ALL CORRESPONDENCE TO:

David A. Hey  
Intellectual Property Dept.  
The BOC Group, Inc.  
575 Mountain Avenue  
Murray Hill, NJ 07974

  
\_\_\_\_\_  
SIGNATURE  
David A. Hey  
\_\_\_\_\_  
NAME  
32,351  
\_\_\_\_\_  
REGISTRATION NUMBER

(Modified)

PTO/SB/92 (09-04)

Approved for use through 07/01/2000. CMB 056 I-0031  
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Attorney Docket: M02B162

Serial No.: 10/536,781

Filed:


Confirmation No.: 4221

### Certificate of Mailing under 37 CFR 1.10

"Express Mail" mailing label number: EQ030266228US

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated below and is addressed to Mail Stop PCT, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450

on October 11, 2005  
Date

  
Signature

Kimberly S. Brown

Typed or printed name of person signing Certificate

Registration Number, if applicable

908-771-1729

Telephone Number

#### Itemized Listing of Attachments:

Transmittal Letter (PTO-1390, in duplicate), Response to Notification of Missing Requirements (1 p, in duplicate), Executed Declaration (2 pp), Executed Power of Attorney (1 p), copy of Notification of Missing Requirements (371 Formalities Letter), and Return Receipt Postcard

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

This collection of information is required by 37 CFR 1.8. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1.8 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Express Mail Label: **EQ030266228US**  
In re Application of **Nigel Paul SCHOFIELD**  
International Appln. No.: **PCT/GB03/05370**  
International Filing Date: **December 9, 2003**  
U.S. Application No.: **10/536,781**  
Title: **"Vacuum Pumping Arrangement"**  
Attorney Docket: **M02B162**

Mail Stop PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

S I R:

**RESPONSE TO NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371  
IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)**

In response to the Notification of Missing Requirements under 35 U.S.C. 371 in the United States Designated/Elected Office (DO/EO/US) (copy enclosed) mailed September 22, 2005, Applicant submits the enclosed Declaration executed by him on October 5, 2005. The Commissioner is hereby authorized to charge to Deposit Account No. 02-2865 the \$130.00 fee required under 37 CFR 1.16(e).

The Commissioner is requested to grant any necessary extension of time and is authorized to charge any additional fee, if required, to Deposit Account No. 02-2865. This request is submitted in duplicate.

Respectfully submitted,



David A. Hey  
Registration No. 32,351  
Attorney for Applicant(s)  
Date: October 11, 2005

The BOC Group, Inc.  
575 Mountain Avenue  
Murray Hill, NJ 07974  
Phone 908-771-6385  
Fax: 908-771-6159

Attachments: Certificate of Mailing, Transmittal Form (PTO-1390, in duplicate), Executed Declaration, Executed Power of Attorney, copy of Notification of Missing Requirements, and Return Receipt Postcard

RECEIVED

SEP 28 2005



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/536,781	Nigel Paul Schofield	M02B162

INTERNATIONAL APPLICATION NO.

PCT/GB03/05370

I.A. FILING DATE

12/09/2003

PRIORITY DATE

12/17/2002

20411

THE BOC GROUP, INC.  
 575 MOUNTAIN AVENUE  
 MURRAY HILL, NJ 07974-2064

CONFIRMATION NO. 4221

371 FORMALITIES LETTER



\*OC000000017063325\*

Date Mailed: 09/22/2005

### NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37. CFR 1.495).

- Copy of the International Application filed on 05/26/2005
- Copy of the International Search Report filed on 05/26/2005
- Preliminary Amendments filed on 05/26/2005
- Information Disclosure Statements filed on 05/26/2005
- U.S. Basic National Fees filed on 05/26/2005
- Priority Documents filed on 05/26/2005
- Specification filed on 05/26/2005
- Claims filed on 05/26/2005
- Abstracts filed on 05/26/2005
- Drawings filed on 05/26/2005

The applicant needs to satisfy supplemental fees problems indicated below.

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.
- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.492(h) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

Total additional fees required for this application is \$130 for a Large Entity:

- \$130 Surcharge.

**ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.**

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

PAULETTE R KIDWELL

Telephone: (703) 308-9140 EXT 216

**PART 1 - ATTORNEY/APPLICANT COPY**

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/536,781	PCT/GB03/05370	M02B162

FORM PCT/DO/EO/905 (371 Formalities Notice)